# SELECTIONS

FROM

# THE RECORDS

OF THE

# MADRAS GOVERNMENT.

*Published by Authority.*

No. V. OF 1855.

# REPORT

OF THE

# ANNAMULLAY FORESTS.

MADRAS:
RE-PRINTED BY H. SMITH, AT THE FORT SAINT GEORGE GAZETTE PRESS.
1857.

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# LIST OF SELECTIONS

FROM THE

# RECORDS OF GOVERNMENT.

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## 1854.

| No. | Title | Size | Rs. | A. |
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Printed and Published by H. Smith, at the Government Press Fort St. George, and sold also by Messrs. Pharoah and Co., Mount Road.

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To Major F. C. COTTON.

*Civil Engineer, 7th Division.*

Sir,

1. As the water and forage has now completely failed in the Forest, all the bandies have discontinued work, and the season may now be said to have ceased. I propose, therefore, giving an abstract statement of the expenditure up to this date, shewing the amounts laid out on each department of the work.

2. At the commencement of the season, as will be seen by my Report for the month of August, 1851, I was led to hope that a sufficiency of sawyers would have come to the Forest, to enable me to have the whole requisite quantity of timber prepared, without using the axe except for felling purposes; but in this I was greatly disappointed, for the results of all my experiments proved, that the quantity of sound planks adapted for the Bombay Dock-yard obtained by sawing, was so small, when compared to the quantity of rejected timber, that it will be many years ere we can hope to procure a sufficiency of sawyers to cut 2,000 planks in a season, or a sufficiency of carriage to remove so very large an amount of building wood as would thus accumulate, so as to be able to cover the extra expense of sawing by the sale of it.

3. The planks required for Bombay are described as follows: " It is of the greatest importance that these planks should be cut straight, fair edged, be sound and free from all defects of a serious nature, and be cut from the side pieces of the tree, so as not to contain the heart-shake or centre of the tree." Now, as far as my experience has taught me, I am inclined to think that the heart-shake in the Malabar Teak tree is far more extensive than in that of the Burmese Forests, and this is to be accounted for, by the former growing in hilly and exposed situations, whereas the latter, for the greater part, is found in low marshy soil. The consequence of this has been that all the trees I cut up this season, in the manner I had seen them cut in Burmah, turned out badly; and out of about 100 logs, containing about 8,000 cubic feet, only about 100 inferior planks, of the dimensions required for the Dock-yard purposes, were obtained, containing, in all, about 1,200 cubic feet;

and though all the remaining wood is serviceable for building purposes, (part of which I have removed to the top of the slip for the Neilgherry Barracks), I was obliged to relinquish my hope of cutting with the saw alone. I therefore, in the middle of the season, recommenced cutting with the axe, and though the waste of wood is great, there is no difficulty whatever in procuring the description of wood required, perfectly sound; for the Malabar axemen, on felling a tree, and cutting it in various places, are enabled to follow the heart-shake in all its windings with the axe, and so avoid it, where in a sawn log it would inevitably appear in the planks.

4. The wastage of this system of cutting is however much to be lamented, but as the demand is urgent it will be necessary to continue it, to some degree, till the sawyers flock more numerously to the jungle, and the carriage for the side pieces, &c., is more easily obtainable. It will, however, be my endeavour to work as much as possible with the saw, eventually, I trust, to the entire exclusion of the axe.

5. The number of planks cut this season with the axe is 1,506, containing about 25,600 cubic feet, but this, I must remark, is forest measurement.

6. The system of measuring planks I have adopted when taking them from the wood cutters, is the same as that in use in the Government Agent's yard at Ponany. On examining a plank, if any slight crack, split, &c., is visible, which may increase—a knife is pressed into it, and to whatever depth it extends, that quantity is deducted throughout the entire plank, so that in the event of the defect increasing the plank may be trimmed to the thickness at which it is taken and registered. From this cause the cubic contents shewn in my books, are at least 20 per cent less than the actual measurements of the planks, but even at the measurements I have given, your original estimate has not been exceeded, for the cutting per cubic foot amounts to about two annas two pie.

7. The carriage of the timber has latterly proceeded most satisfactorily at the rates originally estimated, viz. Rupees 1-4-0 per plank, from Chechallay to the top of the slip. All bandy men have expressed themselves willing to work next season, and as competition arises, I hope to be able to reduce these rates. Contracts have been entered into with the same bandy men, to convey all the planks, hitherto taken to the slip, from the foot of the ghat to the river at Mungara, at the rate estimated, viz., Rs. 4 per plank.

8. In the slipping I have, by improving the slip, made a considerable reduction in the rates estimated, viz., from 8 Annas per plank to 3½ Annas—at the latter of which rates I have contracts out.

9. Water has entirely failed us at the foot of the ghat, so I am now having a well dug large enough for the cattle to drink at, and directly water is obtained, the bandies will re-commence taking the planks from the foot of the ghat to Mungara.

10. The road above the ghat has been passable throughout the season, and has worked very well. The road from the foot of the ghat to Mungara is also in good working order, but will from time to time require some small outlay.

11. The establishment permanently entertained now consists of one Superintendent, one Carpenter, one English writer, one Duffadar, four Peons; and that of the temporary, one Overseer to Sawyers, one Acting Peon, two Kaders for watching planks. The Overseer for Sawyers, Mr. Harrington, has hitherto been employed in the establishment, agreeably to your suggestion, as a temporary servant, to take a portion of the extra superintendence of Sawyers, &c., off my hands; and I have found him so useful and energetic in this Department, and others, of the work, and his intimate knowledge of all the particulars of Forest work so valuable, that I must beg permission to employ him permanently. His salary is 50 Rs. a month or 600 Rs. a year, and as, in future, I shall have the additional duties of the Conservancy department devolving upon me, I shall find extra assistance continually necessary, especially as the number of Sawyers and other workmen increase; and it cannot be expected that a man of Mr. Harrington's stamp and acquirements will consent to be employed for six months in the year, and be thrown out during the other half. One very material recommendation in his favor is, his thorough knowledge of the Annamullay and Agamullay forest, and his perfect willingness to remain in them at any season. Your original estimate for establishment amounted to Rupees 576 per mensem, and this sum received sanction.

12. I have not yet found it necessary to organize the whole of this establishment, and for the sake of economy have merely added from time to time the individuals whose services I found absolutely necessary. By addition of Mr. Harrington, the sum sanctioned will not be exceeded, as I shall require a less number of Peons and Duffadars, and I have not yet found it necessary to entertain the Blacksmiths and Bellows boys, as the smith's work in the forest is but small, and I have found

no difficulty in procuring village smiths occasionally, when there is work to be done.

13. I propose, therefore, that the establishment for the forest should now be as follows, and this will, I think, fully meet all exigencies:

| | | | | |
|---|---|---|---|---|
| 1 | Superintendent | 150 | 0 | 0 |
| 1 | Carpenter | 100 | 0 | 0 |
| 1 | Overseer for Sawyers | 50 | 0 | 0 |
| 1 | Writer | 50 | 0 | 0 |
| 1 | Goomastah | 10 | 0 | 0 |
| 2 | Duffadars @ 8 Rupees each | 16 | 0 | 0 |
| 8 | Peons @ 5 Rupees each | 40 | 0 | 0 |
| 2 | Kaders for watching planks | 6 | 0 | 0 |
| | Total Rupees... | 422 | 0 | 0 |

14. The establishment at Ponany will not be required till the timber now in course of removal reaches the spot, but then the receiver and four peons will have to be appointed.

15. By a rough calculation I have made, I am induced to hope that, in spite of the opposition we have met with from all quarters, and the consequent loss of time, which is, in a work like ours, of the utmost value, and the additional expenses incurred thereby in establishments' pay, &c., your original estimate of sending sound timber to Ponany at half a Rupee a cubic foot will be proved correct, even in the first batch of wood which reaches the Coast, although it will bear upon it a much larger amount of establishment and other expenses in proportion to the quantity of timber, than you had anticipated.

16. The destruction by fire of 600 of our very best and largest sized planks will of course be a dead loss, and will probably increase the cost of the timber of this and last year's cutting to 10 or 12 Annas per cubic foot. Had this infamous crime not been perpetrated, your experiment would have been most fully proved. To shew this I will compare the actual expenditure of the two seasons with the amount of cubic feet of teak cut, and include the amount which will have to be paid to convey it to the coast.

17. The road work, and the proportion of establishment you assigned to it in your report for last season, will not be included in these expenses, as I wish merely to show what has been expended on *timber*

*cutting*. For this reason I also exclude the sawing expenses—as none of the timber cut with the saw is included in the following amount.

*Planks Cut.*

| | | Cubic feet. |
|---|---|---|
| In 1850......1,394 planks containing | .......................... | 34,000 |
| ,, 1851......1,506 Do. | .......................... | 25,600 |
| | Total...... | 59,600 |

*Expenditure on the above.*

| | | |
|---|---|---|
| Establishment for two seasons.......................... | 6,254 0 0 | |
| Axemen for do. .......................... | 8,041 0 0 | |
| Ropes.......................... | 158 0 0 | |
| Huts.......................... | 96 0 0 | |
| Elephant hire.......................... | 400 0 0 | |
| Sundries.......................... | 226 0 0 | |
| Clearing Brushwood.......................... | 35 0 0 | |
| Girdling.......................... | 118 0 0 | |
| | | 15,328 0 0 |

*Add*

| | | |
|---|---|---|
| For carriage of 2,800 planks to the top of slip @ Rupees 1-4-0 per plank.......................... | 3,500 0 0 | |
| For slipping and sundries for do @ 4 annas per plank.......................... | 700 0 0 | |
| For carriage to Mungara for do @ 4 Rupees per plank.......................... | 11,200 0 0 | |
| For floating to Ponany for do @ 1 Rupee per plank.......................... | 2,800 0 0 | |
| | | 18,200 0 0 |
| | Total... | 33,528 0 0 |

18. The above planks, containing nearly 60,000 cubic feet, will cost at Ponany about 33,528 Rupees, or as near as possible nine annas a cubic foot. The cubic contents given are forest measurements, and I fully expect that the one anna per foot in excess of your estimate, will be more than covered by the increase of contents which will be shown on measuring the planks at Ponany. I have put down one Rupee for floating, but this is more than I shall have to pay, as by taking the wood to Mungara instead of to Kanadz the floating is materially simplified.

19. Besides this plank cutting, the work carried on in the forest this season, has included road work, the preparation of Logs for the Gun Carriage Manufactory, and felling log timber for the same purpose—of these latter descriptions of timber about 14,500 cubic feet have been cut. A considerable advance on last year's operations with the saw has been effected, the slip, and roads from the foot of the slip to Mungara have been repaired, the bridge over the river of Colungode, a work of great importance, to the country, has been nearly completed, and independently of the above, my leisure moments have been occupied in rendering such assistance as has been in my power to the Collector of Coimbatore, in collecting the Hill produce of the Annamallies from the Kaders, and in endeavouring to ameliorate the condition of this heretofore oppressed race—by inducing them to cultivate the land, and so become partially civilized—which endeavours have now every prospect of being, in due course of time, crowned with success.

20. From the way in which all classes of workmen expressed themselves on leaving the forest, I have now no fear of want of hands to carry out the work in all its branches, and the only disheartening circumstance which has attended the latter part of the operations of this season, was the incendiarism of the 10th February, which destroyed the batch of timber upon which I mainly depended for a very favorable report from the Bombay Dock-yard.

21. You will be glad to hear that Corporal Reid has sustained his usual character for zeal, integrity, and application to the work during the whole of the past season, and has, in every way, been a most valuable and willing assistant to me.

I have the honor to be, &c.,

(Signed) J. MICHAEL,

*Superintendent Annamullay Forest.*

Coimbatore, 1st April, 1852.

*Abstract account of Expenditure in the Annamullay Forest. On the Timber prepared during the working season of* 1851, *and up to* 31*st March,* 1852.

| | | | | |
|---|---|---|---|---|
| Axemen....... | 3,844 | 3 | 10 | This is for felling and cutting up timber for the Bombay Dock-yard and Madras Gun Carriage Manufactory, also for felling logs for sawing. The planks, 1,506 in number, contained, on an average, 17 cubic feet each ; in all about 25,600 cubic feet, and cost in cutting 3,485-4-8, which shews a cost, in this item of the work, of 2 Annas 2 pie nearly per cubic foot. The balance, Rs. 358-15-2, was for felling logs for sawing and for the Gun Carriage Manufactory ; the whole of these latter, and such of the logs as are remaining uncut by sawyers, amounting altogether to about 14,500 cubic feet, are still in Chechallay. Of the planks, 1,560 have been taken to the slip and 215 slipped, but of these I calculate about 600 to have been consumed in the fire of the 10th Feby. 1852. |
| Sawyers, ..... | 1,075 | 0 | 10 | With the exception of Rs. 18-8-6 for digging pits, the whole of this sum was expended for sawing up logs, which were felled by us, and mounted on pits by means of Elephants ; 100 logs were sawn up, containing about 8,000 cubic feet of timber ; about 2,700 cubic feet of this has been conveyed to the slip station for the Neilgherry Baracks, the remainder is stored in the forest, and is all fit for building purposes, and I propose sending as much of it as Captain Francis calls for, to him next season. The sawing this season did not answer well, not only for want of sufficient workmen, but owing to the very small quantity of sound planks obtained, in proportion to building wood. |
| Ropes........... | 85 | 5 | 9 | For dragging the timber, 28 Rupees of this was paid to a contractor for ropes, which were used in the season of 1850. By doing away with the contract for this item, and having them made in my camp, I have effected a considerable saving. |
| Bandy hire... | 3,372 | 7 | 0 | Of this amount Rs. 1,453-7-0 was paid for conveying timber to Vangul for the Madras Gun Carriage Manufactory in 1850, and was not included in any of my accounts submitted to the Board, as it was originally intended that the Gun Carriage Manufactory accounts should be kept separate ; this plan, however, was abandoned and |
| | 8,377 | 1 | 5 | Carry over. |

| | | | | |
|---|---|---|---|---|
| | 8,377 | 1 | 5 | Brought forward. |
| | | | | they were included in the General accounts, and this sum is mentioned in the account for March 1852. The balance of this sum has been paid for conveying 1,560 planks to the top of the slip. |
| Huts... ......... | 68 | 13 | 6 | This includes hutting for every description of workmen, and for stores, &c. |
| Tools... ..... | 732 | 10 | 5 | This includes carriage, All in store, together with those purchased in 1850. Those purchased this season are as follows.—Pit saws 36—Momittees 37—Hoes 80—Knives 80—Axes 20—Chisels 13—Hand saws 6—Tennon saws 2—Files 1 Gross—Hand saw Files 48—Braces 2—Bits 36—24 Chains—S. Hooks 24—Stamp 1—Jacks 2. |
| Road from Poothoonagrum to Mungara. | 420 | 8 | 1 | This sum was expended by W. Robinson, Esq. during my absence in Burmah, and was for repairing road, building small bridges, drains, &c., it is included in the accounts for March 1852; this road is now in good working order. |
| Road above the Ghat. | 578 | 7 | 4 | Rupees 176-11-8 of this was expended on repairing the slip; the balance was for blasting away rocks, building bridges, &c., on the road made in 1850, and for lengthening by about ¾ of a mile, also for making several cross roads from the Forests. |
| Girdling... ... | 24 | 7 | 0 | For 391 trees girdled in Checkallay forest at 1 anna per tree. |
| Clearing Brushwood. | 35 | 5 | 0 | This sum was expended in clearing the brushwood away from the slip stations, bandy stations, and any spots where timber was lying cut, so as to guard against its being burnt during the periodical fires in the jungle. |
| Hired Elephants. | 744 | 11 | 7 | This includes their food, Mahaouts' pay, &c. About 255-9-3 Rs. of this sum was expended entirely on account of the sawing department, as I was obliged to hire large powerful Elephants to drag the heavy logs, which the Government Elephants were not able to move to the pit. The balance was entirely for moving planks from where they were cut, to where they could be put on bandies. |
| Sundries... ... | 67 | 5 | 11 | This consists of small sums expended during the season for guides, office carriage, stationary, building a dam to the Checkallay River to form a tank, charcoal for smiths, &c. &c. |
| Sundries on account of Gun Carriage Manufactory. | 150 | 12 | 4 | This was expended in 1850 but not included in any of the accounts submitted to the Board of Revenue, as it was formerly intended that the |
| | 11,199 | 2 | 7 | Rupees Carried Over. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 11,199 | 2 | 7 | Rupees Brought forward. Gun Carriage Manufactory accounts should be kept distinct, but as they have now been included in the general accounts, I have included this item in the account for March 1852. | | | |
| Establishment for 15 months. | 4,885 | 3 | 2 | This has been expended as follows. | | | |
| | | | | Superintendent.......... .......... | 2,250 | 0 | 0 |
| | | | | English writer.............. .... | 750 | 0 | 0 |
| | | | | Carpenter.......................... | 883 | 5 | 4 |
| | | | | Duffadar................ ............ | 120 | 0 | 0 |
| | | | | Peons...................... ........ | 300 | 0 | 0 |
| | | | | *Temporary.* | | | |
| | | | | Overseer for Sawyers................ | 400 | 0 | 0 |
| | | | | Acting peons.......................... | 90 | 7 | 10 |
| | | | | Kaders for watching planks......... | 53 | 0 | 0 |
| | | | | Smiths and Bellows Boys............ | 38 | 6 | 0 |
| Elephant Harness. | 37 | 8 | 10 | Of this Rupees 18-4-3 was for a collar made by E. B. Thomas, Esq. the balance is for 6 chest bands made by me for the Government Elephants. after the pattern I saw in use in the Burmah Forests. | | | |
| Total.... | 16,121 | 14 | 7 | | | | |

J. MICHAEL,

*Superintendent Annamullay Forest.*

---

To E. B. THOMAS, Esq.,

*Collector of Coimbatore.*

Sir,

The first batch of teak timber (1,578 planks) from the Annamullaies has been measured and delivered over to the Bombay Government Agent, and I have now the honor to submit a statement of the total expenditure from the first commencement of the Forest operations, up to the 31st December 1852—which when contrasted with the amount of work performed, will sufficiently demonstrate the immense saving which will be yearly effected by Government in working its own Forests, instead of purchasing timber from merchants.

2. Mr. Poulten, the Bombay Government Timber Agent, has measured the planks exactly in the manner he would have done had he been receiving them from a merchant; viz. when any split, crack, or other defect is observed in a plank, a knife is forced into it, and its depth carefully measured, a deduction to the amount of the depth of the

defect is then made throughout the entire plank—this is technically termed "measuring plank at what it will trim to." I have ascertained, by noting the outside measurement of a number of planks, and comparing it with the reduced measurements, that the deductions made amount to about 23 per cent.

3. Plank has always been received and paid for according to this system of measurement, and the fact of the Annamullay Teak having been taken in the same manner this season, will enable me to show exactly the sum Government would have had to pay for this very timber, supposing the Government Forests not to have been worked, and the teak purchased from a merchant.

4. Owing to the expected arrival of the Annamullay timber, Mr. Poulten reduced the prices of the plank offered for sale by merchants this season, about 15 per cent. I have therefore, in making my calculations, taken the average of the prices paid for planks during the last five years, viz., from 1847 to 1851 inclusive, as observing more clearly the prices which would have been given had the Government work not been in operation, for in that case it is reasonable to suppose that the Merchants' prices would not have been lowered; indeed, on the contrary, with the excuse that the timber had to be brought from a greater distance, an increase of the prices might have been expected.

5. The Government Agent's Records show the average of the prices given for the last five years to be as follows—

| | | | | | |
|---|---|---|---|---|---|
| 1st | Class Planks | 67 | Rupees, per 100 | Kolls | $26\frac{1}{6}$ Cubic feet. |
| 2nd | ,, | 64 | | ,, | ,, |
| 3rd | ,, | 54 | | ,, | ,, |
| 4th | ,, | 49 | | ,, | ,, |

6. 1,401 planks, containing 66,413 Kolls, or, as near as possible, 17,378 cubic feet, have been received as suitable for the Bombay Dockyard, Gun Carriage and Ordnance Department. These have been classed as follows.

| | | Planks. | Kolls, | or | Cubic feet. |
|---|---|---|---|---|---|
| 1st | Class | 189 | 9,868-5 | | 2,582 |
| 2nd | ,, | 425 | 23,228-6 | | 6,078 |
| 3rd | ,, | 594 | 25,227-5 | | 6,601 |
| 4th | ,, | 233 | 8,089-2 | | 2,117 |
| | | 1,401 | 66,413-7 | | 17,378 |

7. The total value of these, at the above prices, is Rs. 39,063-10-7.

8. It must be now borne in mind that the greater part of these planks are, comparatively speaking, the inferior and refuse portion of our cutting of 1850 and 1851; 600 of the very best, which had been carefully selected as the largest sized, and soundest planks cut in those two seasons, having been destroyed in the fire of the 10th February, 1852.

9. Had that incendiarism not been perpetrated, all those planks would now have been in the Depôt at Ponany, and from the experience I have now gained, I can safely affirm that every one of them would have been taken into the first and second classes.

10. At the time of the fire I estimated the loss of timber at about 15,000 cubic feet, and judging from the contents shown by our largest sized sound planks, similar to those burnt, which have now been measured and taken into the 1st and 2nd classes, I do not think my estimate was at all over-rated. This would have given, in round numbers, about 57,324 kolls, and to be below the mark, assuming only one half to have been 1st class and one half 2nd class, the value would have been as follows.

| | Cubic Feet | Kolls. | | Rs. | A. |
|---|---|---|---|---|---|
| 1st Class... | 7,500... | 28,662 @ 67 ₩ 100 kolls... | | 19,203 | 8 |
| 2nd ,, ... | 7,500... | 28,662 @ 64 | ,, ... | 18,343 | 10 |
| | | | Total... | 37,547 | 2 |
| Deduct for expenses which would have been incurred in brnging down the 600 planks, shipping 150, carting 3,150, floating 300........................... | | | | 3,600 | 0 |
| | | | Balance... | 33,947 | 2 |

11. To this must be added the value of the planks which have now been delivered over to the Government Agent, viz. Rupees 39,063-10-7, which makes the total value of the timber which would have reached Ponany this season, supposing the 600 which were burnt to have been saved, and the whole to have been purchased from a merchant, to be Rupees 73,010-12-7, no less than 28,765-10-4 in excess of the whole sum expended in the Annamully Forests, since the works there were commenced.

12. The planks now at Mungara, at the foot of the slip, and in the Forest, amount to about 2,741 in number, containing, probably, 50,000 cubic feet. Of these I calculate on 2,000 large sized sound planks reaching Ponany next floating season, and yielding at least 40,000 cubic feet of timber; the remainder will probably be suited to the Madras Gun Carriage Manufactory, and Neilgherry Barracks.

13. To bring 2,000 planks down will cost as follows:—

| | | | |
|---|---|---|---|
| Carriage........... | at | 5 4 0 ........... | 10,500 0 0 |
| Slipping . ......... | „ | 0 4 0 ........... | 500 0 0 |
| Floating........... | „ | 0 8 0 ........... | 1,000 0 0 |
| | | | 12,000 0 0 |

14. These 40,000 cubic feet of teak, if bought from a merchant at the before mentioned rates, would have cost Rupees 88,662-4-5; so that deducting the cost of transport, by this time next year, the saving effected to Government in the item of plank alone, by the Forest works having been in operation, should amount to about 1,06,000 Rupees.

15. In addition to this, about 22,500 cubic feet of loss, Heads and Bolts for the Gun Carriage Manufactory, and rejected timber suitable for the Neilgherry Barracks, are stored in the Forest, and at the foot of the slip, for want of a sufficiency of carriage to move them to their destination.

16. 10,993 cubic feet of teak has been despatched to Vangul, for the Madras Gun Carriage Manufactory. Of this, however, 4,793 cubic feet have been transported from the foot of the Hills to Vangul by the Commissariat Department, at no expence to the Forest department.

17. 224 cubic feet have been sent to Matypolliam, for the use of the Neilgherry Barrack.

18. Above the Ghaut, upwards of ten miles of bandy road has been opened out through the jungle, over which more than 150 carts pass daily during the season.

19. The new slip has been opened out and improved.

20. The river at Colungode has been bridged by a platform bridge of five vents, and the road from thence to Mungara, sixteen miles, has been put in repair, the Nullahs bridged, &c. These last two works, which were necessary for the transport of the teak, have been a great boon to the surrounding country.

21. Independent of the above results of the Forest operations, the many obstacles which were thrown in the way of its success have (with the exception of the burning of 600 of our best planks) been frustrated. Almost all the numerous and unforeseen difficulties which were met with have been overcome, the work is now fairly organized, and the number of workmen, of all classes except sawyers steadily increasing.

22. The operations with the saw proved very unsatisfactory last season, not only as regards the number of workmen I could procure, but the quality of the timber turned out by them was very bad. This year none of the sawyers who had experience of the jungle last season could be induced to enter the Forest, nor did a single individual come forward for a contract to cut plank with the saw, as every one who did so last year underwent a loss, owing to the great difficulty of saving a sound plank (such as will be taken into the Bombay Dock-yard classes) out of a teak tree, without coming on the "heart-shake."

23. With reference to Major Cotton's original estimate of the cost of planks from the Annamullaies delivered at Ponany, experience has shown that the average cubical content of each plank turned out in the Forest, is not so great as that upon which he based his calculations.

24. The cuttings of 1850 and 1851 have given us a very small average upon each plank, many of them, especially those cut at the first outset of the work, having been evidently intentionally cut small, and to waste, with a view to making the Government operations prove a failure. It has been a work of no little difficulty and time to check this, but it has now been entirely put an end to; and the cutting of 1852, with all allowances made for rejected planks, will give us an average I think we can, in future, depend on.

25. I estimate, therefore, the cost of the timber we shall deliver at Ponany next year, to be as below, supposing only 2,000 planks, each containing 20 cubic feet, to be debited to those 40,000 cubic feet, leaving any timber which may be sent to the Madras Gun Carriage Manufactory and the Neilgherry Barracks out of the question, because at present the supply of workmen being limited, the amount of timber which can be supplied for those Departments cannot be determined.

Expense of one Plank containing 20 Cubic feet.

| | | | |
|---|---|---|---|
| Girdling | 0 | 1 | 0 |
| Felling and Cutting up | 3 | 8 | 0 |
| Cart hire | 5 | 4 | 0 |
| Elephant hire | 0 | 8 | 0 |
| Slipping | 0 | 4 | 0 |
| Floating | 0 | 8 | 0 |
| Hutting ropes and Sundries (say) | 0 | 2 | 0 |
| Establishment | 2 | 12 | 0 |
| Total | 12 | 15 | 0 |

26. Say 13 Rupees for 20 cubic feet, which gives us a cost of 10 Annas 4½ Pice per cubic foot.

27. This is 2 Annas 4½ Pice in excess of Major Cotton's estimate, but I confidently expect that the sale of our rejected timber will in the end more than balance the difference.

28. Had we been able to cut planks, giving as large an average cubical content as we at first anticipated, the cost per cubic foot would have been considerably under his estimate.

29. Major Cotton does not take into consideration the sum we shall have to pay the Colungode Numbody (15 Rupees per tree) for any trees cut within the limits of the Forest rented from him, as this expense was not contemplated when his estimate was drawn up. It will be sufficient, however, to state that, supposing each tree to yield only three planks of 20 cubic feet (or 60 in all) leaving the heads and butts suitable for the Gun Carriage Manufactory and other purposes out of the question, the extra expense per cubic foot on planks taken from that part of the Forest, will hereafter be one anna and four pice.

30. A great many of the trees already felled and cut up, are within the Colungode Numbody's limits, but as the boundary line which runs through the thickest part of the teak Forest has not yet been distinctly marked out, it has been found impossible to count the stumps correctly; but as the whole of our trees of this year's cutting, and part of those of 1850 and 1851, have been undoubtedly taken from the rented line, is distinctly marked so as to admit of their being properly counted, the number of trees Government will have to pay for, will be about 2,000, at 5 Rupees a tree, or Rupees 10,000, which on the plank cutting alone of the three seasons, 92,177 cubic feet, will be an extra charge of Annas 1-9 per cubic foot.

31. I have fonnd it quite impossible to keep the accounts of the timber supplied to the Madras Gun Carriage Manufactory, and the Neilgherry Barracks, distinct from the general accounts; for, very often a plank cut and intended for the Bombay Dock-yard, on a re-inspection, may be found to have some slight defect, which may render it unsuitable; it has therefore to be transferred to the Gun Carriage files, and vice versa. I would therefore propose that merely the account of the number of cubic feet of timber, sent down from the forest for the Madras Gun Carriage Manufactory, and for the Neilgherry Barracks, be supplied to those Departments respectively, and that the cost incurred by me in furnishing the timber, be refunded by them, and credited to Government in my accounts.

32. The cost of 20 cubic feet of timber at the foot of the slip will be as follows.

| | | | |
|---|---|---|---|
| Girdling | 0 | 1 | 0 |
| Felling and cutting up | 3 | 8 | 0 |
| Cart hire | 1 | 4 | 0 |
| Elephant hire | 0 | 8 | 0 |
| Slipping | 0 | 4 | 0 |
| Hutting ropes and Sundries | 0 | 2 | 0 |
| Total | 5 | 11 | 0 |

or 4 Annas $6\frac{3}{5}$ per cubic foot, say 5 Annas ; to this no establishment has been added, as I have supposed the whole to be debited to the Bombay timber.

33. The cartage from the foot of the Ghaut to Vangul will be about 4 Annas per cubic foot, and to Matypolliam about 2 Annas, so that I would suggest that the Superintendent of the Gun Carriage Manufactory should refund to my account at the rate of 9 Annas per cubic foot for all timber delivered at Vangul, and 5 Annas per cubic foot for such as may be taken up by the public carts at the foot of the slip. In like manner the Executive Engineer, Neilgherry Barrack, should pay 7 Annas for timber at Matypolliam, or 5 Annas at the foot of the slip. This course would, I think, materially simplify the accounts of all three departments.

34. I regret that I have hitherto been unable to meet the demands of the Madras Gun Carriage Manufactory to the extent I could have wished. The principal cause of this is, that all planks which have been cut of the dimensions called for by Major Maitland, have been sent down for the Bombay Dock-yard. Had timber of the scantlings furnished by the Gun Carriage Manufactory of Bombay, been acceptable to that of Madras, I could have supplied a much larger quantity.

35. The work performed by the Government Elephants in the Forest has been a clear saving of about 2,000 Rupees ; for I estimate that if hired Elephants had been procured to do the work they have performed, as nearly as possible that amount would have been expended in their payment.

36. Some of the planks cut this season have been prepared from trees which were not girdled ; I have done this with a view of ascertaining whether the planks turned out from green trees, are superior in quality to those cut from girdled trees.

37. The most experienced plank cutters are unanimous in asserting, that the fall of a dead tree considerably increases the "heart-shake," and renders the timber more defective, whereas a green tree, when felled, sustaining little or no interior damage by its fall, planks cut from it are much more sound. As far as I have yet been able to observe, this appears to be the case.

38. I would now offer some remarks upon the system of measuring timber for the Bombay Dock-yard.

39. Plank is measured and classed at "what it will trim to," which is, as I mentioned in the early part of this report, about 23 per cent less than the actual measurement of the timber. The operation is exceedingly tedious, as it has taken from 15th December to 12th January to measure 1,401 planks. This system was very necessary as long as Government was dealing with merchants, and was agreeable to the merchants, inasmuch as it admitted of their cutting off and selling to others, such end pieces of the planks as were unsound, and for which the Government Agent allowed nothing.

40. This season I have cut off and sold all unsound parts of the planks in the same manner, which, after deducting* the expenses of sawing, have realized a sum of Rupees 484-13-0, which will be credited to Government in my accounts for next month; and as it must be borne in mind, that the timber is already Government property, and that the Agent is no longer purchasing it at exorbitant prices from merchants, I would beg to recommend that the Annamullay timber should in future, on its arrival here, be examined by the Agent; and after rejecting any planks which may have been damaged en route, that he should merely take the outside measurement of the sound ones. They could then either be classed here, or afterwards in Bombay, but in either case Government would have the benefit of retaining all the pieces usually sawn off and sold at the low price here, all of which, I feel sure, would be worked up, and found serviceable, either in the Dock-yard or Ordnance Department.

41. In the 1,578 planks sent down this season were included 230 planks which I had rejected in the forest as unfit for the Dock-yard, but which I sent down for the purpose of ascertaining whether it would be more profitable to sell rejected timber at Ponany or at the foot of the Ghaut. Of these planks 153 have been taken into the classes, princi-

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* Not deducting the expenses of sawing, which amount to Rupees 11-1-5.

pally for the Gun Carriage Department, and the remainder, containing (together with 77 of the longest end pieces) 9,728 K. 6 P. 16-7 Kolls, or 2,545 cubic feet, have been sold by public competition, to a native timber merchant here, at the rate of 27 Rupees per 100 kolls, for Rupees 2,626-11-2, or Rupees 1-7 per cubic foot. This sum will also be credited to Government in next month's account.

42. By this it is apparent that, as carriage in the Forest becomes more easily procured, it will be quite possible to cover a great part of the expense of cutting, and bringing down the sound planks, by the sale of the rejected ones; and in the course of a year or two I hope to see the cost of the timber, as estimated by me in a former part of this report, considerably reduced.

43. In conclusion, I would beg to bring to your notice that the steadiness and zealous exertions of Corporal Reid, acting as carpenter, have tended not a little to the success of the Forest operation.

(Signed) J. MICHAEL,
*Superintendent Annamullay Forest.*

(Signed) E. B. THOMAS,
*Collector.*

Ponany, 16th January 1853.

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To E. B. THOMAS, Esquire,
*Collector of Coimbatore.*

Sir,

1. I have the honor to enclose the annual statement of expenditure in the Annamullay Forests for the year 1853-54. The amount disbursed during the past season is Rupees 27,822-13-9, and the total sum expended since the commencement of the works is Rs. 67,124-6-7.*

2. Nothing could have been more favorable than the commencement of the past season. Workmen and Carts were abundant—but just as I had collected upwards of 600 axemen, cholera, unfortunately, broke out among them to a most alarming extent; and in a few days, the whole of them had deserted, and it was about a month before confidence was sufficiently restored among them, for them to return to the jungle.

| | RS. | A. | P. |
|---|---|---|---|
| * Amount expended as per Account | 75,179 | 7 | 2 |
| Deduct amount recovered by sale of Timber, &c. | 8,055 | 0 | 7 |
| | 67,124 | 6 | 7 |

Owing to this cause, the number of planks cut this season is not so great as I at first anticipated; however, I succeeded in again collecting a considerable number of artificers, and before the jungle became too unhealthy for us to remain in it any longer, no less than 1,353 planks had been prepared, and were all carted at once to the top of the slip.

3. The planks of the former season's cutting were all transported to Mungara in time for the usual October freshes—which are considered the most suitable for floating timber, but, as I mentioned in my Report for December 1853, these freshes failed entirely, so that instead of being able to submit 2,270 planks, for the inspection of the Bombay Government Agent, only 890, which reached Ponany by the early freshes of July and August, were examined by him. Of these, 853 were received as fit for the Bombay Dock-yard, and were classed as follows.

| | | | | Kolls. | borrels. | $\frac{\ }{16}$ |
|---|---|---|---|---|---|---|
| Class 1st | 128 | Planks containing | | 9,351 | 2 | 15½ |
| ,, 2nd | 365 | ,, | ,, | 21,973 | 0 | 7¼ |
| ,, 3rd | 340 | ,, | ,, | 17,081 | 2 | 3 |
| ,, 4th | 21 | ,, | ,, | 992 | 7 | 4 |
| | 853 | | | 49,398 | 0 | 14 |

4. As 100 Malabar kolls are equal to about 26⅛ cubic feet, these 853 planks contained as nearly as possible 12,925 cubic feet, and were pronounced by Mr. Poulten, of a very superior description; a great proportion of them being of the 1st and 2nd classes.

5. The great saving effected by the Forest work was so clearly shown by the results of last season's operations, that I will confine myself to remark here, that if the above quantity of timber (very little more than one-third of the season's cutting) had been purchased from merchants at the average market value of plank timber at Ponany for the last five years, it would have cost Government, as nearly as possible, 30,037 Rupees—which is about 3,000 Rupees more than the whole sum expended in working the forests, paying the establishment, and including the cost of the Marchenaikenpolliam bridge, during the 12 months season of 1853-54. The remaining 1,380 planks, which reached Mungara in time for the usual October freshes, but which remained in the Depot there, owing to the great drought, would have probably yielded an amount of timber to the value of at least 45,000 Rupees.

6. I was exceedingly disappointed at not being able to send down the last mentioned batch—as I am thus unable to show so large a saving as I had hoped.

7. The planks cut last season, together with those remaining in the forest of former seasons' cutting, have been, for the greater part, removed from the jungle, and are now in course of transport to Mungara; these will, I trust, all reach the Depot in time to be floated to Ponany by the early freshes of this season.

8. I entered into a contract, at the end of last season, with a person, for floating the whole of the planks then remaining at Mungara, to Ponany; but, owing to the failure of the after rains, he was unable to fulfil his agreement. He would however, have done so when the first freshes come down the river this year, but I received a report a short time ago that he had died of cholera. I have some hopes that his heirs may be induced to carry out his contract, but in the event of their refusing to do so, I much fear that the greater part of his advance, Rupees 335, will be lost to Government, for although he was a person whom I could trust, and who had been in the habit of floating timber all his life—he was a man of very small property—and could furnish no good security. As timber floating in the Malabar rivers is well known to be so precarious an employment, and so liable to accident, that security can seldom or never be obtained from the floaters. Last season the freshes in the river were so great that the lashings of the rafts broke, and, as I reported at the time, nine planks were missing; of these six pieces have been recovered, and I have lately received a communication from the Resident of Cochin informing me of the recovery of six pieces of plank on the river bank within the Cochin limits. These accidents are quite unavoidable, but the planks can almost always be recovered after some time and trouble.

9. The timber I have dispatched to the Madras Gun Carriage Manufactory and to the Neilgherry Barracks during the past year, is as follows.

*Madras Gun Carriage Manufactory.*

| | | |
|---|---|---|
| Planks | 5,560 | cubic feet. |
| Logs | 1,662 | cubic feet. |
| Total | 7,222 | ,, |

*Neilgherry Barracks.*

| | | |
|---|---|---|
| Planks and end pieces | 4,916 | cubic feet. |

10. Bills for the value of the above timber will be sent by me to those Departments, and the amount will be carried to the credit of the Forest accounts, when realized.

11. The carriage of the timber for the Madras Gun Carriage Manufactory has all been furnished by the Commissariat Department, as all the country carriage I was able to procure in this neighbourhood, was employed in transporting the Bombay Dock-yard planks to Mungara.

12. The road hence to Vangul is now undergoing repair, and the river at Marchenaikenpolliam has been bridged, so that I hope this road may now become more popular among the bandy men of the district, and carriage be more easily obtained.

13. The roads in the Forest, and below the Ghaut leading to Mungara, have required slight repairs from time to time, which have all been executed as they became necessary, and the cost included in the monthly accounts. They are now in good order, and without any impediment to cart traffic.

14. A number of the planks handed over to the Bombay Government Timber Agent this year, were cut from trees which had not been girdled. They had not suffered at all from the effects of the sun, as they had been lying for some time in the Forest, and had become partially seasoned, before they were removed from the shade—there was no perceptible difference, after they reached Ponany, between the planks cut from girdled trees and those cut from ungirdled ones, all being pronounced by the Timber Agency Establishment, of very fine quality, and remarkably free from splits and defects. I have therefore come to the conclusion that it will be better, in future, to cut plank from green trees, and allow them to season gradually in the Forest, and while in course of transport to the coast, instead of felling girdled trees. Experience has shown that the natural heart-shake of a girdled tree is so much increased by its fall, that a much greater number of sound Dock-yard planks can be obtained from a green tree, than from a girdled one of equal size.

15. In August last the boundary line of the Forest rented by Government from the Colungode Numbody, was distinctly laid down, and marked permanently by means of a ditch dug through the jungle wherever Teak trees are growing.

16. At the close of the season, the trees felled within the rented Forest were counted, and the number ascertained to be 1,650 trees felled and 202 trees girdled—at the time of renting the Forest, the Colungode Numbody received an advance of 7,500 Rupees—as the price of 1,500 trees—the balance due to him, therefore, was 750 Rupees for 150 trees felled, and 505 Rupees for 202 trees girdled—these sums were paid to him, and included in my accounts.

17. The East Indian Overseer, Mr. Harrington, resigned his situation in the Establishment on the 15th March, and I have not been able as yet to replace him by any efficient person. He has been employed principally, for the last two seasons, in superintending the carting of the timber to Mungara and Vangul, and in a short time, when the jungles become healthy, and work in the Forest re-commences, it will be necessary to appoint some one in his place. If I cannot procure a fit person, I propose employing one or two intelligent natives, whose joint pay will not exceed the salary drawn by Mr. Harrington, to carry on the duties hitherto performed by him.

18. I would now beg to bring to your notice the great distance (about 50 miles) at which this establishment is located from any Medical Assistance, and would solicit your recommendation for the services of a Medical Subordinate. During the working season the number of workmen of all classes, together with the establishment, &c., amounts frequently to upwards of 1,000 men, and as the climate of the Forest, even at its best, is exceedingly damp, and unsuited to natives, fever, diarrhœa and dysentery, are always more or less prevalent in the camp.

19. This season, as I mentioned in the early part of this report, cholera broke out, from which disease upwards of twenty deaths occurred, besides several from fever.

In these instances, if any Medical Assistance had been at hand, some of the men might have recovered, but as the other workmen deserted in a body, I had no means of removing the sick to Coimbatore or Palghat. I have no doubt that the assurance of receiving treatment in the event of falling sick in the Forest, would tend much to increase the number of men who come there for employment.

I have the honor to be, &c.,

(Signed) J. MICHAEL,

*Superintendent Annamullay Forest.*

(Signed) E. B. THOMAS,

*Collector.*

Marchenaikenpolliam, 30th April 1854.